INFORMATION SYSTEM FOR CONFERENCE ORGANIZER

Compiled as a condition to complete Bachelor Degree of Informatics Department
Faculty of Communication and Information

Submitted by :
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INFORMATICS DEPARTMENT
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INFORMATION SYSTEM FOR CONFERENCE ORGANIZER

SCIENTIFIC PUBLICATION

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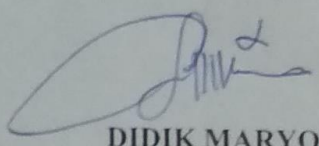

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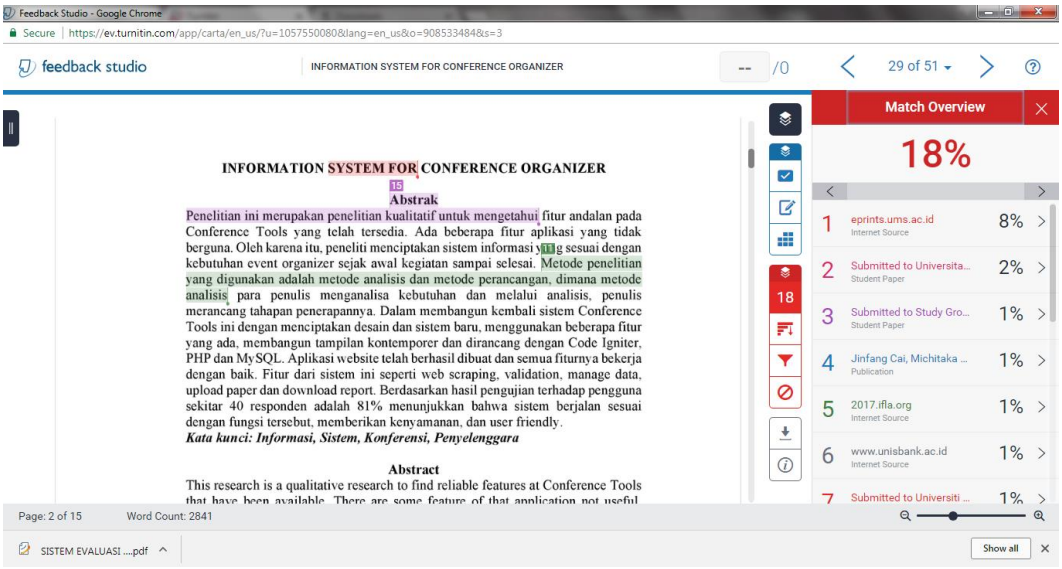

INFORMATION SYSTEM FOR CONFERENCE ORGANIZER

Abstrak

Penelitian ini merupakan penelitian kualitatif untuk mengetahui fitur andalan pada Conference Tools yang telah tersedia. Ada beberapa fitur aplikasi yang tidak berguna. Oleh karena itu, peneliti menciptakan sistem informasi yang sesuai dengan kebutuhan event organizer sejak awal kegiatan sampai selesai. Metode penelitian yang digunakan adalah metode analisis dan metode perancangan, dimana metode analisis para penulis menganalisa kebutuhan dan melalui analisis, penulis merancang tahapan penerapannya. Dalam membangun kembali sistem Conference Tools ini dengan menciptakan desain dan sistem baru, menggunakan beberapa fitur yang ada, membangun tampilan kontemporer dan dirancang dengan Code Igniter, PHP dan MySQL. Aplikasi website telah berhasil dibuat dan semua fiturnya bekerja dengan baik. Fitur dari sistem ini seperti web scraping, validation, manage data, upload paper dan download report. Berdasarkan hasil pengujian terhadap pengguna sekitar 40 responden adalah 81% menunjukkan bahwa sistem berjalan sesuai dengan fungsi tersebut, memberikan kenyamanan, dan user friendly.

Kata kunci: Informasi, Sistem, Konferensi, Penyelenggara

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Abstract

This research is a qualitative research to find reliable features at Conference Tools that have been available. There are some feature of that application not useful. Therefore, researchers create information systems suitable by event organizer needs from the beginning of activity until done. The research method used is the method of analysis and design method, where the method of analysis of the authors analyze the needs and through the analysis, the authors design that stages of application. In rebuilding this Conference Tools system by creating new designs and new systems, using some of the existing features, building a contemporary look and designed with Code Igniter, PHP and MySQL. The website application has been successfully created and all the features are working properly. The feature of this system like web scraping, validation, manage data, upload paper and download report. Based on the results testing to user around 40 respondent is 81% show that system run suitable with that function, give comfort, and user friendly.

Keywords: Information, System, Conference, Organizer

1. INTRODUCTION

On September 6, 2017, a military agenda conference was held to bring together the most influential defence industry leaders, congressmen, policymakers, military leaders and senior decision makers to examine the top defence issues through business and technology lenses at the Pentagon City. On

October 28, 2017 there was also a conference activity at UNS called ICLIQE, but both showed usage features that exceeded the needs of users. Their hope is to make the conference use features that suit their needs to make it easier for users and participants. Zaini, Jalali and Kurniawan describe how to "Change the manual system into a website-based" (2017, p.2). It lends support to the authors to convert the manual system of conference activities into website-based. Kumar (2017) also said that the current technological development as a solution to facilitate the search for information and current activities. One of the solutions of the authors is to make information systems for conferences using existing features, but developed with different look and packaging into a website. As expressed by Kazak Vice (2017), that method in the academic literature as an attempt to handle certain features using Web development. Therefore, the author tries to develop this system into a user friendly system and in accordance with the needs of users.

It is also supported by Anthony Spierings (2016) that one of the solutions in the design of information and communication technology is in accordance with the event organizer. In addition Nurgiyatna also said, "Purchase of Conference Information Systems generally require many facilities that may not yet fit the needs of users." (Personal Communication, September 2017).

So, the authors create a new system and it uses the features already in the conferencing tool. However, new innovations from the authors placed on new faces, new tools, new systems and features to suit the needs of users. The results of this study is expected that users can use this conference app with comfort because the features as needed and the display is very user friendly. In addition it also provides convenience for users in operating and ease for the end in finding information about this activity.

2. METHOD

Author uses Spiral Model like expressed by Amano (2017) that this model has characteristics in which each stage of work is completed before proceeding to the next phase. So, refers to the Spiral Method, the author uses this

model because it have complex analysis and the ripe of process in every level that beginning from requirement, development, risk analysis, design like in Figure 1.

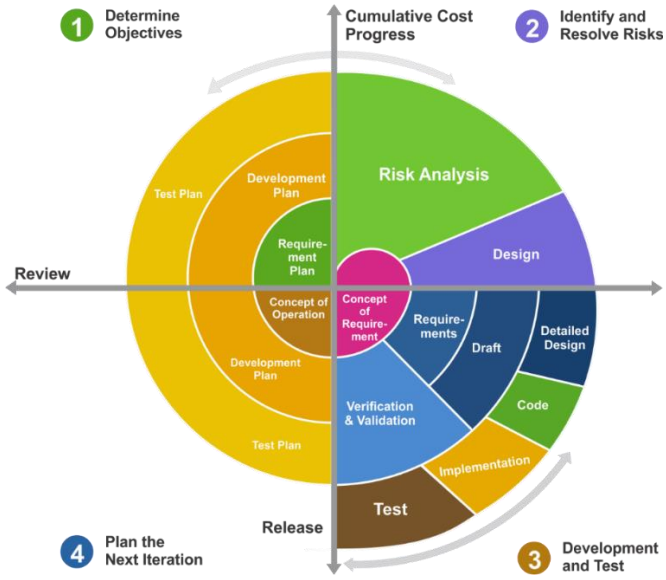

Figure 1. Spiral Model

2.1. Requirement

Requirements relating to research include : making information system of conferencing activities with existing features but new views, online registration, review papers, ticketing, downloading papers and abstracts, biodata management of conference participants by event organizer, displaying participant data and recapitulation results .

2.2. Development Plan

The steps taken by the author is to make the schedule of implementation of this system from the process of interviewing the needs of users, analyse the needs and risk analysis, make design, implement PHP code with databases, test and create reports. The activity starts from May 2017 to December 2017.

2.3. Risk Analysis

The sequence of risk analysis steps from the Allegro Octave method includes : Assigning Drivers, Profile Assets, Identifying Threats, Identifying and Reducing Risks. Authors Choose Event Organizer as a driver, and identify the assets it needs. After that the authors analyse the threat that will appear if there is a conference application and if no. When it's all gathered, just identify which

issues are most easily reduced first. This is done so that in making the application and its application not many problems encountered.

2.4. Design

The design of this system the author adjusts to the needs of users mentioned in the interview and processed into the design stage as follows : UML-based design, architecture design, database design, user interface design, and design of monitoring systems (administrator).

2.4.1. UML-Based Design

Platt (2018) says that Unified Modelling Language that includes DFD, Use Case Diagram and Activity Diagram. On this operating system created three users as follows : Administrator, Committee, Reviewer and User Public. Each user can perform each task as in Figure 2.

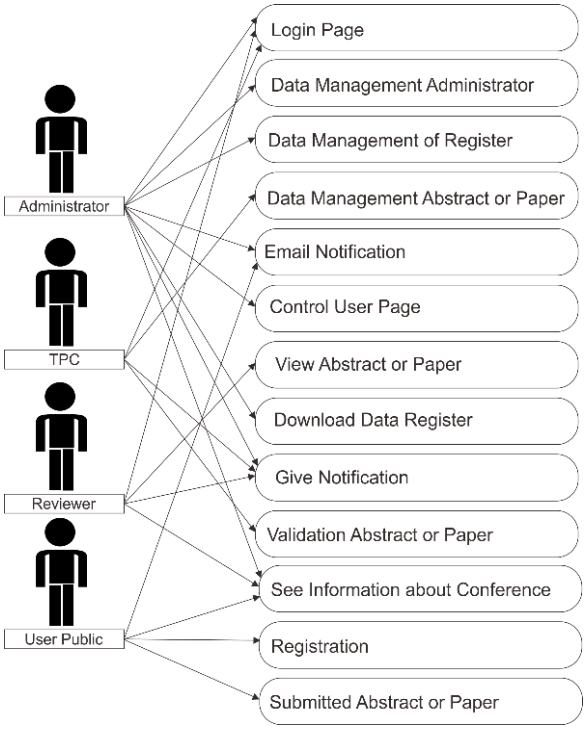

Figure 2. Use Case Diagram

Figure 2 also describes the public users who have the lowest privilege on this system. The workflow in the conference information system can be seen in Figure 3.

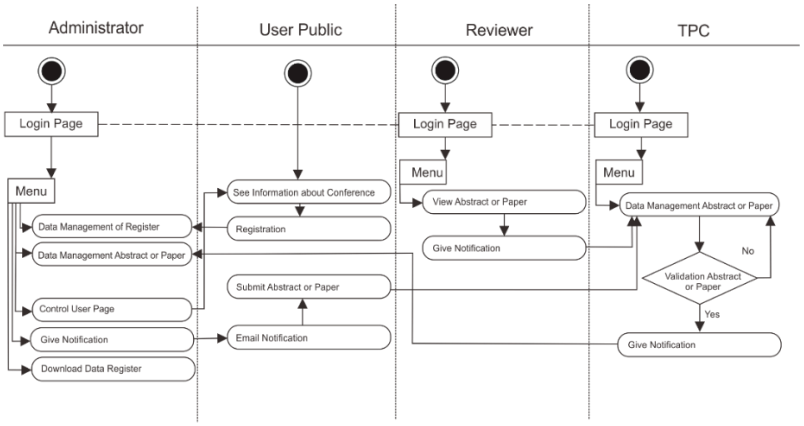

Figure 3. Diagram Activity Management Data

2.4.2. Architecture Design

Author create this system use Service Oriented Architecture (SOA), because it have many benefits like optimization, transformation, responsiveness, effectiveness and functionality. In confidentiality and integrity data security, in the process will be aligned IT with Business Operations, in the service will be improved information flow, etc. So, the author implements SOA in the creation of rooting and design layout in web pages, databases, and user roles.

2.4.3. Database Design

In this conference information system has a database structure that can be seen in Figure 4.

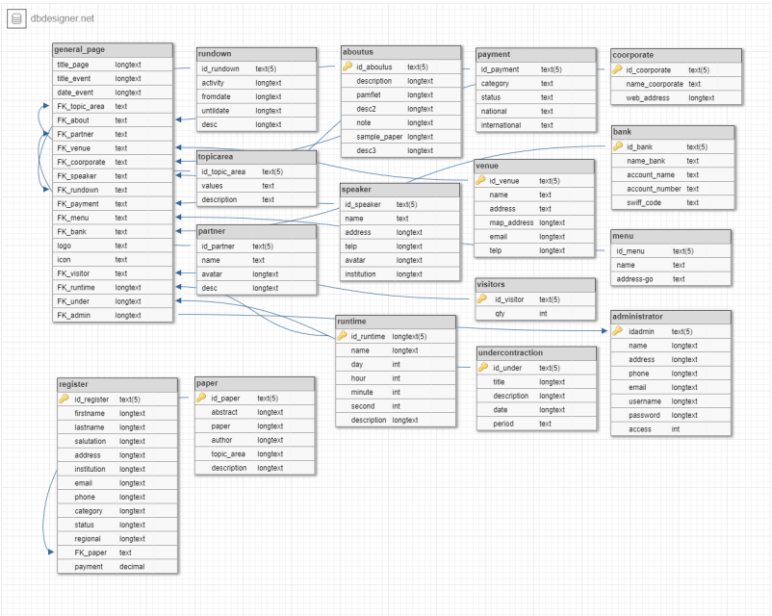

Figure 4. Database Design

In the conference tool database there are several tables as follows: general page, speaker, payment setting, partner, rundown, bank account, register, administrator, runtime, paper, visitors, venue, etc.

2.4.4. Interface Design

The information system for built conferences has user pages and responsive admin pages.

a. Homepage of User Public

This page has some features, such as about activities, speakers, schedules, costs, locations summarized in one page like this Picture 5.

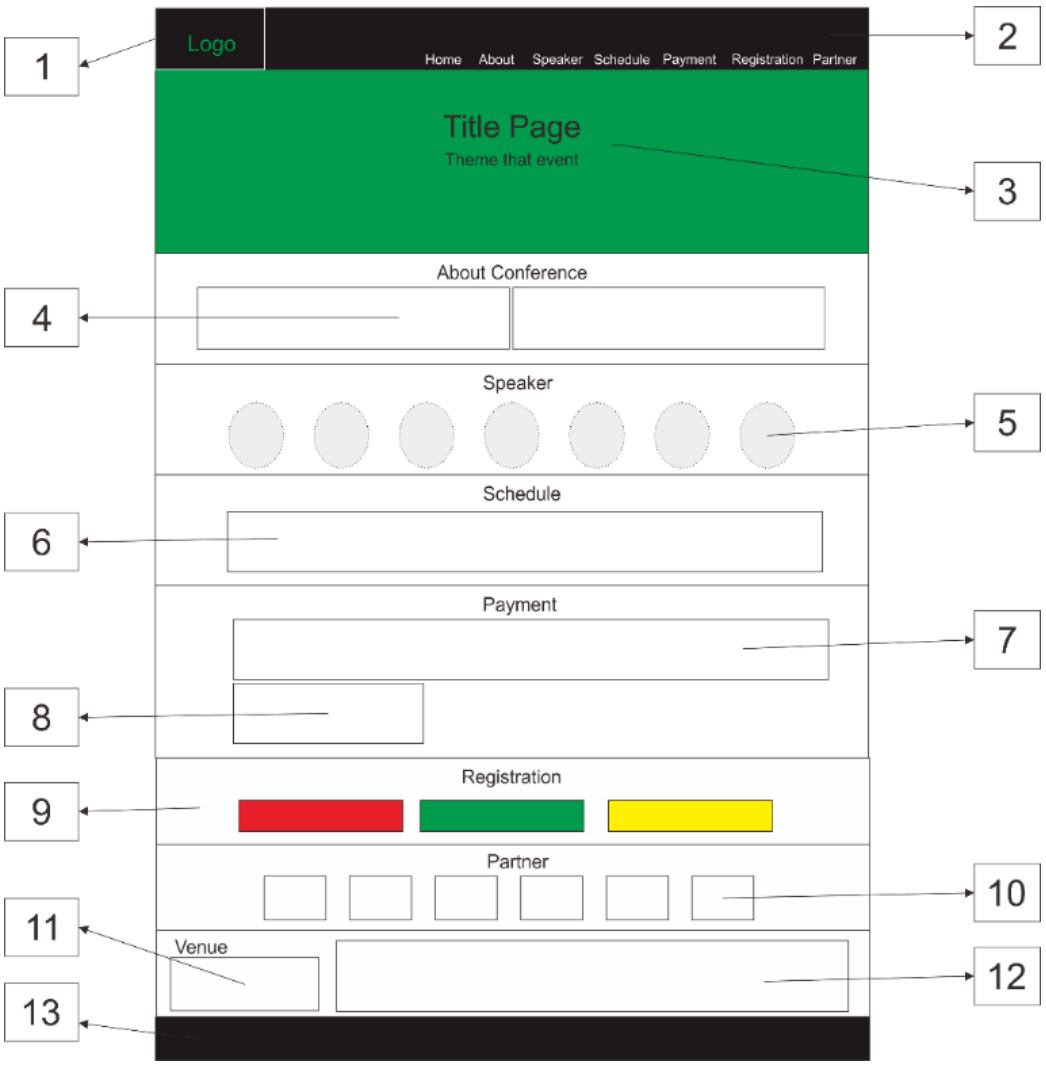

Figure 5. Homepage of User Public

Description :

No. 1 : Logo Conference activity
No. 2 : Menu Bar
No. 3 : Title, Theme and data of Event
No. 4 : About Conference
No. 5 : Speaker of event
No. 6 : Rundown of event
No. 7 : The payment of event
No. 8 : The bank information
No. 9 : Registration, Login
No.10 : Partner to support that event
No.11 : Owner this event
No.12 : Location (Map)
No.13 : Footer

b. Registration Pages

This page is used for registration that has several menus of data self, institution, email, phone, status, category, username, password to login in the user account.

c. Login Pages of User

After registration that can login use the appropriate username and password when filling the registration

d. Register Account Pages

Only the category of presenters can access all the menus / facilities like Figure 6. In contrast to the category of participants, who can not access the paper menu, because the competitor is not a presentation.

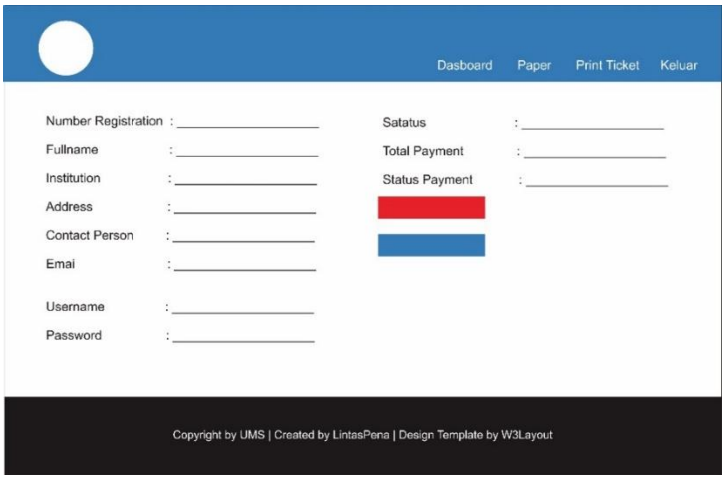

Figure 6. Register Account Pages

e. Login Pages of Admin

This page is for admittance to admins, committees and reviewers as shown in Figure 7.

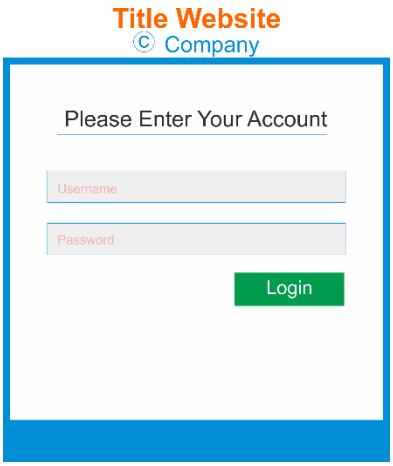

Figure 7. Login Pages of Admin

f. Dashboard Pages of Admin

This page is divided into three different access actors following Administrator, Reviewer and Committee. The difference of the three admin types at the control facility like Figure 8.

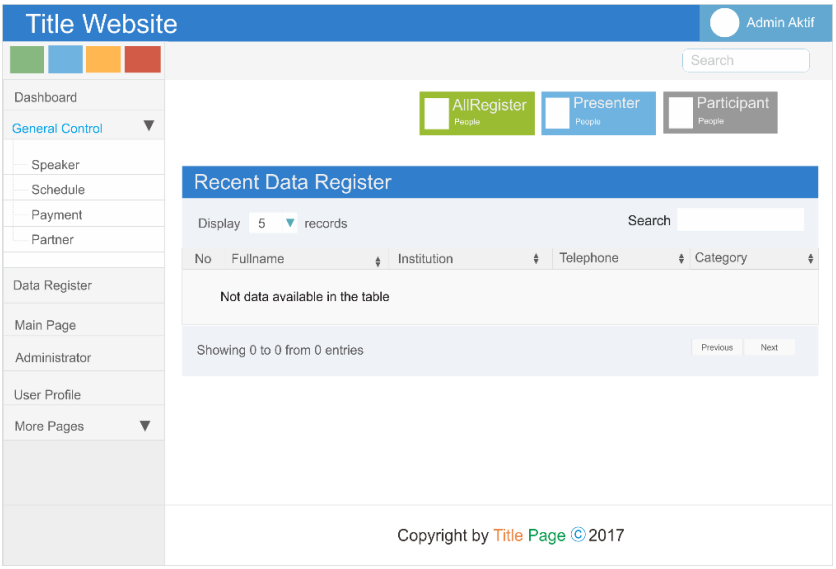

Figure 8. Admin Page

2.4.5. Technology Design

This information system is built using a single programming language PHP and implemented with MySQL, CSS, JavaScript and using Code Igniter as

the framework. In addition, this research also uses some of the following software and hardware technologies: Sublime Text 3, XAMPP, Opera Mini, PHP 5.2 Dual Core Laptop, 6GB RAM, 250GB HDD, and Windows 10 Operating System.

2.5. Test and Implementation

2.5.1. Test

The method used is teaching to use information, independent practice, and testimony in LPSDM EDOCOM Bantul Yogyakarta on December 20th, 2017.

2.5.2. Implementation

This stage describes by using Language Programming Algorithm Flow chart. It is implemented using PHP Language and JavaScript with system flow as in Figure 12.

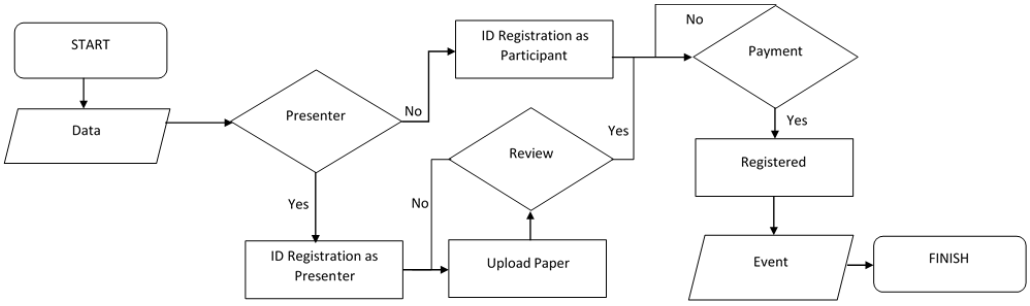

Figure 9. Flowchart Information System for Conference

2.6. Verification and Validation

This process is a verification performed at every stage by Event Organizer to the author. The author also provides sample results and before the verification process, but customers can also provide advice or requests. Verification is done by two methods, namely: black box testing and questionnaire.

2.7. Maintenance

Although in making this information system complete with risk analysis at every step and process of verification and validation. But the authors will be ready in the process of maintaining this system, or ready to develop this system according to user needs.

3. RESULT AND DISCUSSION

3.1. Black Box Testing

This test is a test method based on application details such as application display, functionality available on the application, and functional flow alignment with the process desired by customers such as Table 1 that will be done according to user needs.

Table 1. Black Box Testing

No	Scenario	Test Case	Expectation	Result
1	Web Scraping Feature	Parsing basic data and spatial data from the destination website	Get all data needs from the destination website, then the data was stored to the systems	Valid
2	Login Testing	Select user access right by inputting username and password	After validate, user will redirect to user profile and admin page when success fully or show error message when failed.	Valid
3	Management basic data and spatial data	Editing basic data and spatial data by operator	The data was modified successfully by operator	Valid
4	Upload document form	Uploading document from admin page	The document was uploaded successfully and saved into database	Valid
5	Download Document	Download document front website	The document was downloaded successfully and save in to PC	Valid

3.2. Questionnaires Testing

In the process is divided into several criteria and level of assessment. Table 2 shows the Assessment Criteria and Table 3 to show the names of each

rating level. Table 2 has ten criteria to assess the quality of the project from the user.

Table 2. Assessment Criteria

No	Assessment Criteria	Code
1	Loading Speed	P1
2	The Speed of moving web pages	P2
3	Front page design (interface)	P3
4	The colour composition of website	P4
5	Display the website	P5
6	Menu Structure presented	P6
7	Similarities with function previous program	P7
8	Layout design	P8
9	The website address is easy to remember	P9
10	Speed of access in downloading	P10

Table 3. Level Scoring

No	Name Level Scoring	Code	Point
1	Very Satisfied	VS	5
2	Satisfied	S	4
3	Quite Satisfied	QS	3
4	Less Satisfied	LS	2
5	Not Satisfied	NS	1

The system has been tested to 40 people who have done the evaluation by filling out the questionnaire. The results are as reported in Table 4.

Table 4. Questionnaire Result

	VS	S	LS	QS	NS	∑P	∑P*5	∑All	Value
P1	8	27	5	0	0	40	200	163	**82%**
P2	11	28	1	0	0	40	200	170	**85%**
P3	14	17	9	0	0	40	200	165	**83%**
P4	9	23	7	1	0	40	200	160	**80%**
P5	9	17	12	2	0	40	200	153	**77%**
P6	13	21	6	0	0	40	200	167	**84%**
P7	10	23	6	0	1	40	200	161	**81%**
P8	11	22	6	1	0	40	200	163	**82%**
P9	9	26	3	1	1	40	200	161	**81%**
P10	9	25	5	0	1	40	200	161	**81%**

Average percentage of respondents answers regarding the statements on questionnaire as follow. Formula : **Value = (∑All / ∑P*5)*100%**. From the average has been obtained the graph for the results as shown in Figure 10.

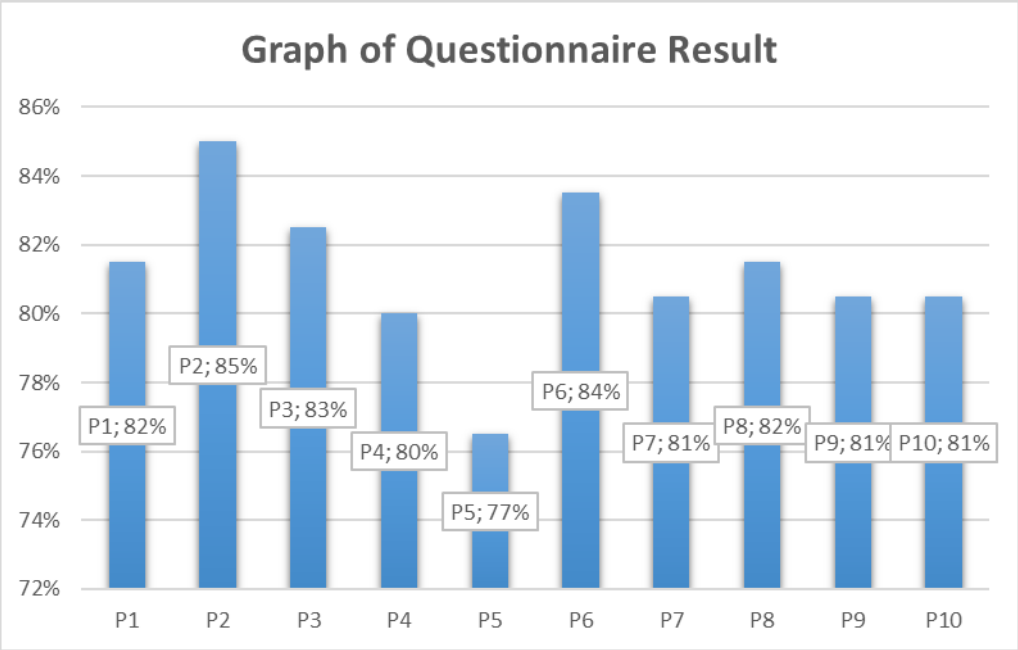

Figure 10. Graph of Questionnaire

3.3. Result

There are five features that become scenarios in black box testing such as web scraping feature, login testing, basic data management, document upload and document download which all have valid results. Test the black box to find out the maximized functionality on each feature. In addition, in the questionnaire test there are 10 assessment criteria that become points of assessment of the respondents and it has five levels of scores ranging from very satisfied and not satisfied. Nearly 81% of Questionnaire results stated satisfied users. Website views reached 77 percent as the lowest rate among all ranking categories. The speed of web pages shows value to 84 percent and that is the highest among all categories of respondents. Approximately 77 percent of the lowest level shows the system is running well. From the test of 40 respondents, the authors get the result that in terms of convenience and ease of the application has an average of 81%.

4. CONCLUSION

This research produces an information system for conferencing activities that suits the needs of users. The test results from the making of this system is expected to facilitate the user in organizing the conference activities and facilitate the participants who join the conference activities. The conclusion of this research is that the features can suit the needs of users, and have a new look. The statement is the result of black box testing and questionnaire. Black box testing done writing has a valid result of the five points tested. And the questionnaire has an average result of 81% of the ten assessment criteria assessed by users and public users.

4.1. Advice

In the use of this system is expected users can update the browser, so the execution process runs fast. If the user's browser has not been updated at least at high connection speed and fixes its performance just like the user requests. So, it will operate at high speed, not high performance. This system can be used in computers with low quality.

REFERENCES

Amano, Y. (2017). *Design a learning Spiral Model to make an authentic question: instructional desig*n *for learning environment by to enhance the motivation for learning.* IFLA WLIC : Japan.

Bandiera, G. (2018). Back from basics : integration of science and practice in medical education. *Med Educ*, 52(1), 78–85.

Cai, J. (2017). *A Collaboration-Based Spiral Model for Curriculum Development of Older Adult Education: A View from Service Science Perspective*. Advanced Institute of Science and Technology : Japan.

Kumar, A. (2017). Information Technology Industry. *Journal of Management Science, Operations & Strategies*, 1(1), 12-15.

Meland, P. (2018). *Computer Systems and Software Engineering: Concepts, Methodologies, Tools, and Applications*. SINTEF ICT : Norway.

Mitchtchento, T. (2017). Modelling resonances and orbital chaos in disk galaxies Application to a Milky Way spiral model. *EDP Sciences*, 1(5).

Montenegro, C & Barragan, G. (2018). Alignment of Software Project Management with the Business Strategy in VSEs: Model and Evaluation. *Springer : Cham*, 721(1).

Nurgiyatna. Conference Tools for University. (University of Muhammadiyah Surakarta, October, 2017).

Platt, R. (2018). *The Past, Present, and Future of UML*. Murdoch University : Australia.

Poulsgaard, K.S., & Clausen, K. (2018). *Modelling Workflow Data, Collaboration and Dynamic Modelling Practice*. Springer : Singapore.

Spierings, A. (2016), Issues that support the creation of ICT workarounds. *Towards a theoretical understanding of feral information systems*, 27(1), 775–794.

Wakil, K., & Janawi, N. (2017), Analyzing Interaction Flow Modelling Language in Web Development Lifecycle. *(IJACSA) International Journal of Advanced Computer Science and Applications*, 8(1).

Zaini, Z., Jalali, B., & Kurniawan, Y.I. (2017), Sistem Kasir dan Pembukuan di Toko Bangunan "Murah" dan Penyewaan Sound System "Kurnia", *UMS ETD-db Repository*, 1(1), 2. Retrieved December 31st, 2017, from http://eprints.ums.ac.id/49236.